

Installation, Operation and Maintenance Instructions

KESSEL *Aqadive*[®] Rainwater Management System with Control Unit Aqatronic and with Assembly package Aqaset

Aqadive with Control Unit Aqatronic S
Aqadive with Control Unit Aqatronic K
Aqaset Assembly package

Art.No. 85 601

Art.No. 85 801

Art.No. 85 602



Product Advantages

- Plug-in ready compact system
- No pump noises with pump underground in storage tank
- Quick and easy installation

The installation and service of this unit should be carried out by a licensed professional servicer

Company - Telephone No.

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(Subject to technical amendments)

Dear Customer,

Thank you for choosing a KESSEL Rainwater Management System.

Before leaving the KESSEL factory, the entire system has been thoroughly checked and has passed all of the stringent KESSEL quality assurance tests. Upon receipt of the Aqadive Rainwater Management System please check to make sure that it has been delivered undamaged. In the case that damage has occurred during delivery, see the 'Guarantee' section of this User's Manual.

Before placing the KESSEL *Aqadive Systems* in service, please carefully read and follow this Installation and User's Manual. The information provided in this manual is valuable and will help provide years of safe and reliable service of the *KESSEL Rainwater Management System*.

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1. Safety Guidelines



The personnel for the installation, operation, maintenance and repair must have appropriate qualifications for performing this work. The area of responsibility, authority and the monitoring of the personnel must be precisely regulated through the operator. Operational safety of the supplied system is only guaranteed when operated according to the specified use. Under no circumstances are the limits specified in the Technical Data to be exceeded.

This system operates on electrical voltages and drives rotating, mechanical parts.

Failure to follow the operating instructions may result in serious damage to property, physical injury or fatal accidents.

For installation, operation, maintenance and repair of the system, always observe the accident prevention regulations, applicable DIN/VDE (German Association of Electrical Engineers) standards and guidelines, and the regulations of local public utilities.

Warning!

The system is part of an overall system. Please therefore also follow the operating instructions of the overall system and of the individual components. Before carrying out any installation, maintenance, inspection or repair job on one of the components always disconnect the entire system and secure against being switched on again.

Do not operate the system in areas where an explosion may occur.



The control unit is under voltage and is not to be opened. Only qualified electrical technicians ("Elektrofachkraft") are to carry out work on electrical installations. The term "Elektrofachkraft" is defined in the VDE 0105 specification.

Never open the pump casing/housing. Any work on the pump which goes beyond that described in the chapter Inspection and Maintenance is not permitted.

Ensure that the electric cables and all the other electric parts are in perfect condition.

Never attempt to start the system if any damage has occurred.

Caution!

Any changes to or conversion work on the system are only permissible after consultation with the manufacturer. For safety purposes use original spare parts and accessories approved by the manufacturer. The use of other parts may make the liability for consequential damage null and void.

The system has no influence on the quality of the service water.

In the event of a backflow waste water from the sewer may back up into the service water network.

In the event of damage, water may leak from the basic unit - Beware of slipping! For example, draw the water off by installing a floor drain.

The service water is not fit for human consumption and body hygiene purposes. Attach warning labels stating "**Caution: Water Not For Drinking**" at all draw-off points.

The basic tank may drop off if not properly secured or if installation is faulty. Risk of injury! Ensure that the wall or supports have an adequate load-bearing capacity.

Do not rest ladders or the like on the basic unit.

When working on the system make sure that the suitable steps are provided.

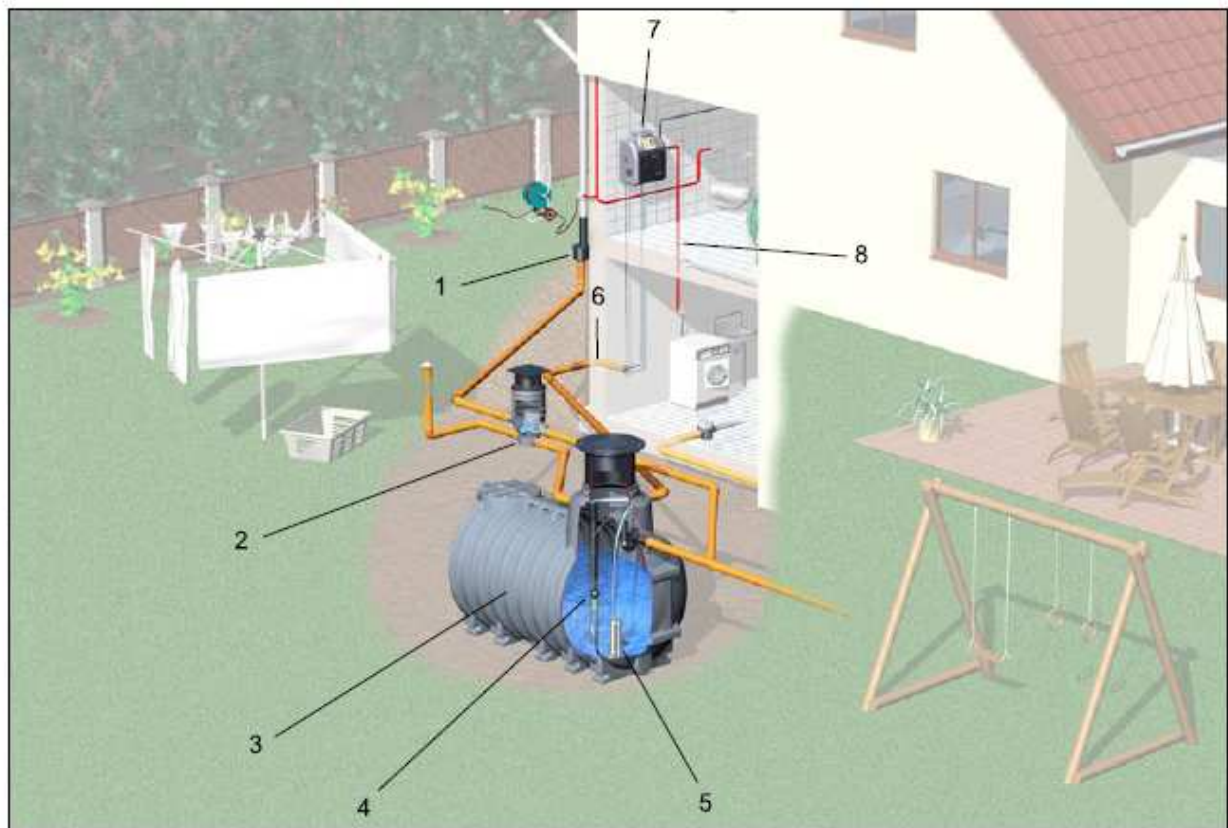
2. General

2.1 Applications

The KESSEL rainwater pump system Aqadive® and Aqaset are pressure boosting systems. They are designed for the supply of service water to single or two family homes. A reliable supply of service water is guaranteed by automatically feeding rainwater from a cistern into the service water system. The backfeed is carried out via the basic unit or funnel with open outlet (in compliance with DIN 1989, Part 1) directly into the cistern. The system rainwater can be used for flushing toilets, watering gardens, washing clothes and as cleaning water.

The Aqadive® and Aqaset systems can be mounted in any position but are **only to be installed above** the backflow level. The place of installation is not to be subject to flooding and must be protected against frost.

You will find instructions for the layout of the system in the chapter Technical Data.



- 1 Roof collection drain
- 2 System 400 rainwater filter
- 3 Aqabase®-Komfort rainwater storage tank
- 4 Course intake filter (floating)

- 5 Submersible pump
- 6 Sealed foundation entrance pipe DN 150
- 7 Aqadive® pumping unit with control unit Aqatronic® S
- 8 Service water network

2. General

2.2 Aqadive® system components

The KESSEL Aqadive® rainwater pumping unit with control unit Aqatronic® S / Aqatronic® K comprises the following components:



- 1. (Basic unit)
- 1.1 Backfeed drinking water
- 1.2 Cover
- 1.3 Access door
- 1.4 Emergency overflow
- 1.5 Solenoid valve for backfeed operation
- 2. Control unit

- 3 (Pumping unit)
- 3.1 Submersible pump
- 3.2 Inlet of submersible pump
- 3.3 Outlet of submersible pump
- 3.4 Pressure switch
- 3.5 Inlet of pressure switch
- 3.6 Outlet of pressure switch
- 3.7 Reset button

2.3 Aqaset system components

The KESSEL Aqaset rainwater pumping unit comprises the following components:



- 1. (Backfeed unit)
- 1.1 Funnel for backfeed with potable water
- 1.2 Solenoid valve
- 2. (Control unit)
- 2.1 Plug
- 2.2 Float switch

- 3 (Pumping unit)
- 3.1 Submersible pump
- 3.2 Inlet of submersible pump
- 3.3 Outlet of submersible pump
- 3.4 Pressure switch
- 3.5 Inlet of pressure switch
- 3.6 Outlet of pressure switch
- 3.7 Reset button

2. General

2.4 Functional description:

The pumping unit comprises a submersible pump and the pressure switch. The maintenance free pressure switch features an automatic demand-oriented On/Off switching which takes up any pressure surges, an integrated protection against dry-running as well as a non-return flap.

Rainwater operation:

In event of a pressure drop in the service water network resulting from an actuated draw-off point, the submersible pump is switched on via the pressure switch. The rainwater is drawn from the cistern and fed into the service water network via the outlet of the pressure switch. When the draw-off point is switched off the pressure switch is deactivated after a short run-on time. A constant pressure is guaranteed through this flow-dependent disconnection.

Backfeed operation:

If a defined minimum water level is fallen short of in the cistern a solenoid opens, potable water is backfed into the cistern via the open feed up to a defined switching point.

The submersible pump then delivers the potable water from the cistern to the service water network as in rainwater operation. This guarantees a reliable supply at all times.

With the Aqaset system the potable water feed is directly via the float switch.

With the Aqadive® system there are two different control units available for controlling the fully automatic potable water backfeed.

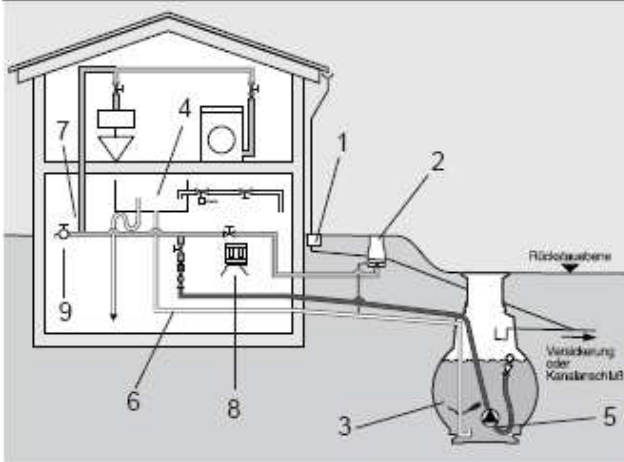
The **KESSEL control unit Aqatronic® S** controls the potable water backfeed via a float switch installed in the cistern.

The KESSEL control unit **Aqatronic® K** is used to determine the level in the cistern via an ultrasonic sensor, which is then digitally displayed on the control unit. In event of backflow from the sewer an optical as well as an acoustic warning signal is given (with setting of the alarm point). Other switching points can be programmed as required.

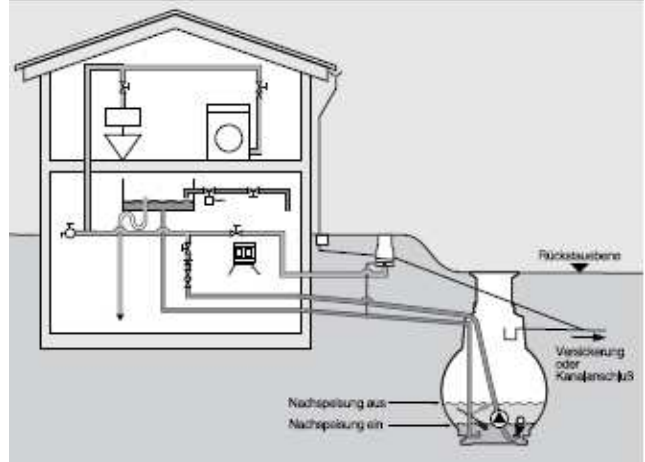
The potable water backfeed can also be manually actuated in both control units.

2.General

Flow diagram - rainwater operation



Flow diagram - backfeed operation



Rückstauebene – backwater level

Versickerung... - seepage system or connection to sewer

Nachspeisung - backfeed On
- backfeed Off

- 1 Roof collection drain
- 2 Rainwater filter
- 3 Rainwater storage tank
- 4 Potable water backfeed
- 5 Submersible pump

- 6 Pressure switch
- 7 Emergency overflow with trap
- 8 Control unit Aqatronic® S
- 9 Service water network

3. Technical Data

3.1 Dimensions and weight

Aquadive®



Aqaset



- 1 Emergency overflow
- 2 Supply to storage tank

Fig. Shows Art. No. 85801
 Flow direction
 Width x height 629 x 614 mm
 Depth: 235 mm
 Trinkwasser – Potable water
 Art. No.: 85 602
 Fließrichtung - Flow direction

3.2 Control unit

For technical data please refer to the provided original operating instructions.

3.3. Solenoid valve

Voltage / frequency	230 V AC / 50 Hz
Input power	21 VA (pull-in) 12 VA / 8 W (operation)
Protection type	normally closed
Continuous operation	IP 65 - possible
Pressure range	0.2 - 16 bar
Kv value	4.0 m ³ /h
Connection inlet/outlet	1/2" IG
Approval	suitable for potable water

3. Technical Data

3.4 Pressure switch

Voltage/frequency	230 V AC / 50 Hz
Switching capacity	max. 10 A or max. 1.8 kW
Protection type	IP 55
Power cord	1.4 m
Power link	0.3 m
Switch-on point	2.4 bar (top draw-off point positioned max. 20 meters above the pressure switch)
Switch-off point	water consumption ≤ 0.5 l/min. or when run dry
Pressure difference	min 0.7 bar (between switch-on point & switch-off point)

Restart after running dry of the pump through actuation of the "RESET" button

Pressure drop	approx. 0.3 bar at a flow rate of 3 m ³ /h
Pressure gauge	display range 0 - 10 bar
Delivered medium	clear water
Dimensions l x w x h	214 x 128 x 154 mm
Connection input	1" AG
Connection output	1" IG

3.5 Float switch with plug

Switching capacity DC	min: 40 mA at 8 V; max: 60 mA at 20 V
Switching capacity 230 V AC	min: 15 mA, max: 100 mA
Protection class	I (with earth conductor acc. VDE 630)
Operating temperature	max. 50 C
Type	Filling (NC contact) Up => Contact open Down => Contact closed
Cable length	20 metres

3. Technical Data

3.6 Multi-stage underwater vertical circulating pump

Voltage/frequency	230 V AC / 50	Continuous operation	possible
Hz		Inlet connection	1 1/4 " IG
Power input	1000 W	Outlet connection	1 1/4 " IG
Insulation class	F	Materials	rust-free
rpm	2800	Operating temperature	max. 40°C
Thermal protection	integrated	Dimensions l x w x h in mm:	580 x 150 x 150
Mains lead	10 metres	Weight:	15 kg
Delivery medium	clear water	Max. submersion depth	20 meters

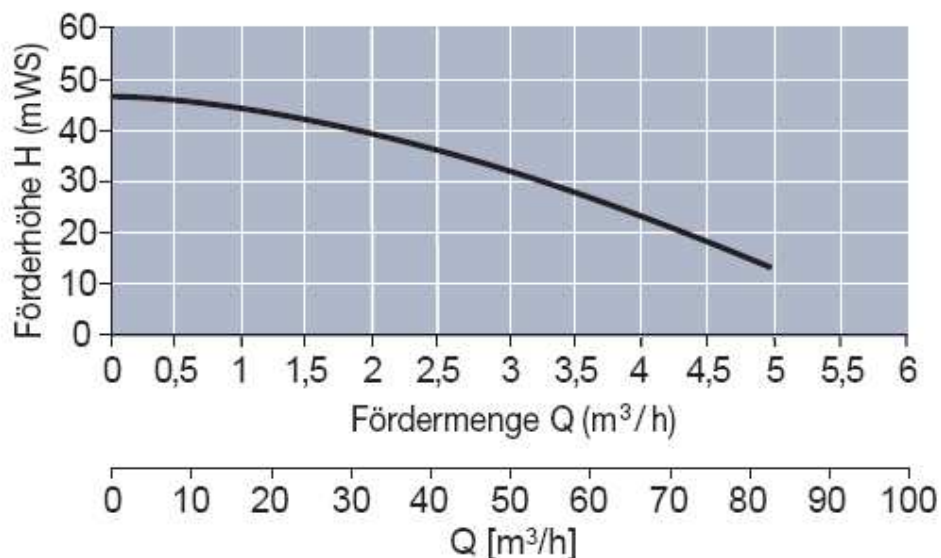
Delivery data

Max. flow rate Q (m ³ /h)	1.4	1.8	2.4	3.6	4.8
Max. flow rate Q (l/min)	20	30	40	60	80
Max. delivery height in metres	43.3	40.2	36.3	26.1	13.4

Delivery height as a function of flow rate

Delivery height H (mWC)

Flow rate Q (m³ / h)



4. Assembly

Always observe the “Safety Guidelines” chapter!

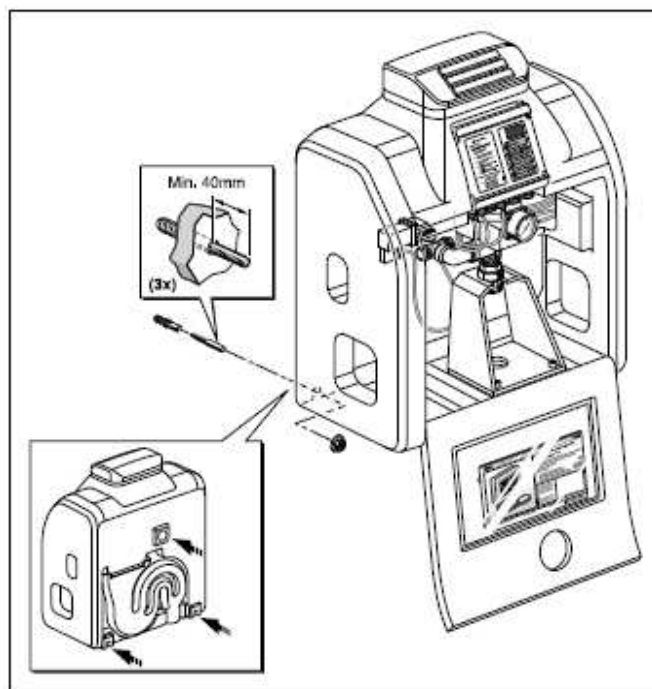
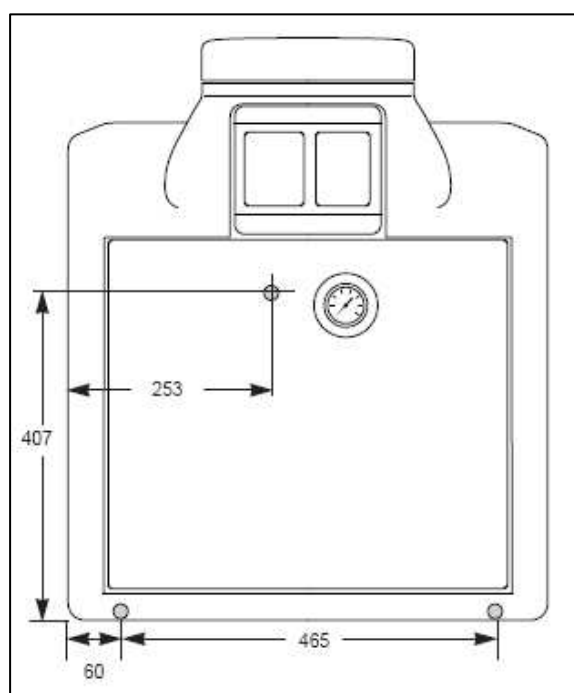
Remove KESSEL rainwater pump system from packaging and remove securing devices for transportation. You will find the accessories provided in the same box.

Install the KESSEL rainwater pump system in well-vented rooms that are dry and frost-free.

Installation is only to be implemented above the backflow level.

4.1 Wall mounting *Aqadive®*

- When selecting the position for the *Aqadive®* always make sure to leave approx. 50 cm space above the system for adjusting and maintenance work and ensure that the pipe for potable water backfeed can be installed with a downward gradient to the cistern.
 - Mark three holes for mounting the unit at the desired place on the wall and drill three holes (diam. = 10 mm). Insert the provided dowels and screw in dowel pins with min. 40 mm standout.
- Mount basic unit with inserted emergency overflow onto the dowel pins, align using a spirit level and tighten union nuts.

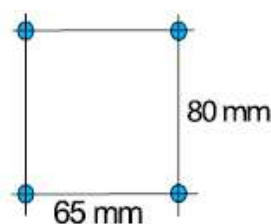


4.2 Wall mounting *Aqaset*

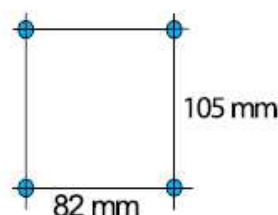
When selecting the position for the Aqaset make sure to leave approx. 20 cm above the system for adjusting and maintenance work and ensure that the pipe for potable water backfeed can be installed with a downward gradient to the cistern.

Hole patterns

Support for pressure switch:



Support for potable water backfeed:



Fasten both supports to the wall using appropriate means and align with spirit level.

4. Assembly

4.3 Connection of emergency overflow (only with Aqadive®)

In rooms with a floor drain it is sufficient to conduct the overflowing water out of the basic unit via the emergency overflow without connection to the sewer, as water does not discharge in normal operation.

If there is no floor drain the emergency overflow DN 70 must be connected directly to the sewer network.

If any changes are made to the emergency overflow the DVGW approval (German Gas and Water Expert's Association) ceases to be valid. There is no longer guarantee of safety and hygiene.



4.4 Potable water connection

For the connection to the potable water network we recommend a flexible armoured 1/2" hose. An additional shut-off valve facilitates all maintenance work.

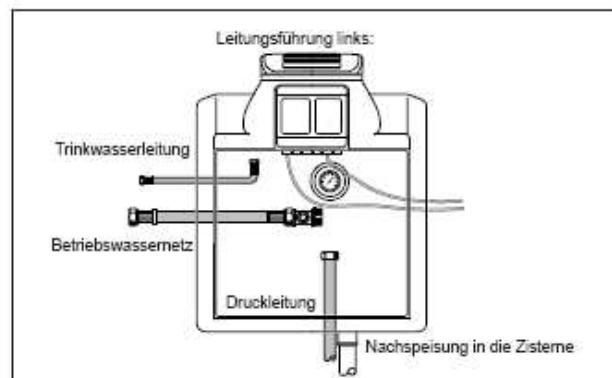
- Install a pressure reducer if there is a water pressure of more than 4.5 bar or if there are severe pressure fluctuations in the potable water network.
- To ensure the functioning of the solenoid valve a fine filter must be installed on site in the potable water network. No liability will be accepted for faults in the operation or damage caused through the omission of a fine filter.
- Flush and clean the potable water feed pipe prior to initial operation.

4.5 Connecting cistern to basic unit Aqadive® (Aqaset to be connected accordingly)

- For the intake from the rainwater storage tank we recommend the floating KESSEL fine/coarse filter Article no. 85050/85051. Using this suction pipe the rainwater is drawn

out of the cistern from the cleanest area which is approx. 15 cm below the surface. The formation of sediment on the bottom of the tank as well as suspended matter such as, for example, pollen or rust particles on the water surface cannot be ruled out completely even when using a filter.

- If the system is operated using a rigid

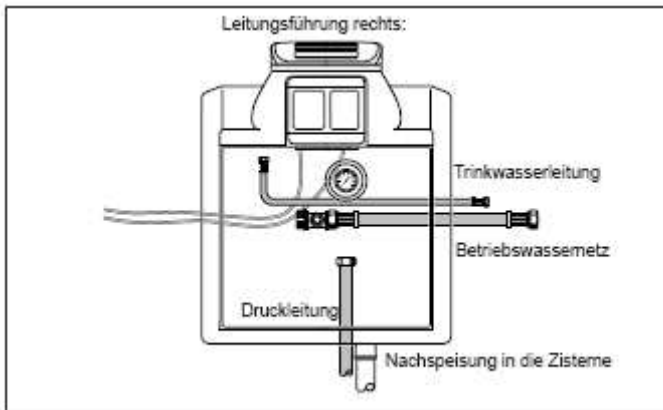


suction pipe, position the strainer in such a way that solids cannot be sucked in. Always maintain a distance to the bottom of 15 – 20 cm. A flow restrictor must additionally be installed.

- The submersible pump should stand on the base of the rainwater storage tank. The provided cable with Karabiner is useful for installation and maintenance work.
- The pressure pipe or an existing service water pipe for filter flushing must always be installed at a frost-free depth to avoid freezing up. The pressure pipe should have a diameter of at least DN 25.
- The pipe for potable water backfeed must have a minimum diameter of DN 50 and be installed with a downward gradient to the cistern.
- The network piping of the submersible pump and the cable of the ultrasonic sensor or the float switch must not be damaged as a result of the pipe routing method.
- We recommend laying all lines (water and electricity) in a conduit DN 150 in order to facilitate access for any maintenance and repair work.

Leitungsführung	- Pipes on the left
Trinkwasserleitung	- Potable water pipe
Betriebswassernetz	- Service water network
Druckleitung	- Pressure pipe
Nachspeisung in die Zisterne	- Backfeed to cistern

4. Assembly

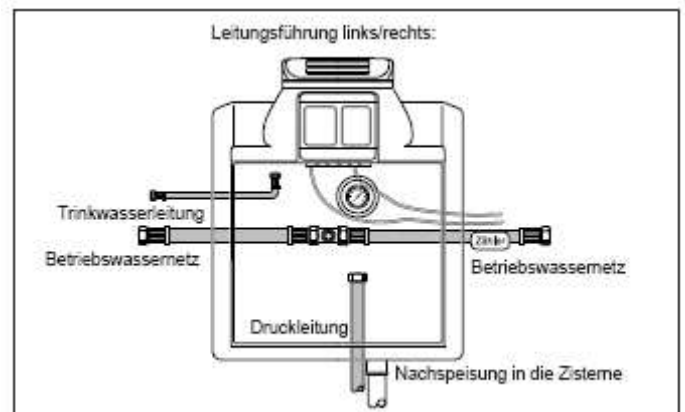


Leitungsführung rechts: Pipes on the right
 Trinkwasserleitung – Potable water pipe
 Betriebswassernetz – Service water network
 Druckleitung – Pressure pipe
 Nachspeisung in die Zisterne- Backfeed to cistern

- In the event of pipes being routed from the cistern into a cellar room install the backflow proof KESSEL sealed foundation entrance pipe (Art-Nr. 85412).
- The backfeed pipe should not open out upstream of the rainwater filter. This could result in water losses in the event of a contaminated filter and liming of the filter mesh.
- The backfeed potable water should flow into the cistern via the inlet settlement zone.

4.6 Connection to service water network

- Connect submersible pump to the service water network. The user can freely select the arrangement of these pipes. (left, right, on both sides, see diagrams).
- For the connection to the service water network we recommend a flexible armoured hose. The pressure connection should additionally be fitted with a shut-off valve with low flow resistance. This facilitates any subsequent maintenance work.
- The service water pipes must be clearly marked in accordance with DIN 1989 Part 1.



Leitungsführung links/ rechts - Pipes on the left/right
 Trinkwasserleitung - Potable water pipe
 Betriebswassernetz - Service water network
 Druckleitung - Pressure pipe
 Nachspeisung in die Zisterne - Backfeed to cistern

5. Electrical connections

Caution!

The connection is only to be carried out by a qualified electrician (**"Elektrofachkraft"** as defined in the VDE 0105 specification). Always observe the pertinent valid regulations, laws and standards. Also make sure to observe the "Safety Guidelines" chapter as well as the operating instructions of the used control unit.

An earthed dual socket is required for the installation of the KESSEL rainwater pumping system Aqabull®. Fuse 16 A delay-action with residual current circuit breaker 30 mA.

Maintenance work on the system may lead to splash water discharging. Depending on the routing of the service water piping, install the dual socket in a protected position on the side, above the system.

5.1 Wiring of the components

Aqadive®

Network	→	Pressure switch	→	Submersible pump
Network	→	Control unit	→	Solenoid valve

Aqaset:

Network	→	Plug	→	Float switch
				Solenoid valve

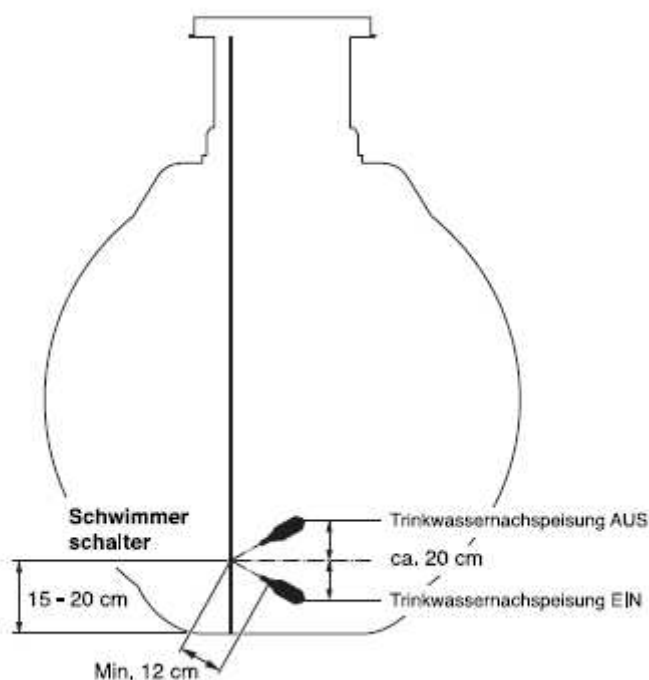
For assembly of the ultrasonic sensor (Aqatronik® K control unit) or the float switch (Aqatronik® S control unit) please refer to the provided original operating instructions.

5.2 Installation of float switch with plug

The float switch can be installed in the cistern at the desired height to meet the users' individual needs. There must be a minimum distance from the float switch to the bottom of the tank of approx. 15 - 20 cm to avoid intake from the layer of sediment in the cistern.

Note:

If installation conditions are dubious it is recommended to install the float on a rod which can be moved and fixed from above. In this way, the position of the float switch can be easily altered even with a filled cistern.



Schwimmerschalter	- Float switch
Trinkwasser...AUS	- Potable water backfeed OFF
Ca. 20 cm	- approx. 20 cm
Trinkwasser...EIN	- Potable water backfeed ON

6. Commissioning

Always observe the “Safety Guidelines“ chapter!

Caution!

- Prior to commissioning the system clean all parts belonging to the rainwater management system such as rain collecting gutter, downpipes, rainwater collection drains, rainwater filters, rainwater storage tank and drain to sewer/seepage system. Always observe the original operating instructions.
- All feeder and drain pipes must be flushed and pressure tested.
- **Never** start up a pump in dry condition!

6.1 Commissioning of control for potable water backfeed

- Close the shut-off valve for the potable water
- Start up the control unit (Aqadive®) or the backfeed unit (Aqaset). Always observe the original operation instructions.

6.2 Backfeed operation

- Carefully open the potable water shut-off valve.
- Actuate the manual potable water backfeed if this is not automatically actuated.
- Check the backfeed pipe for leaks and secure drainage into the cistern.
- If the backfeed operation of the potable water supply into the cistern is not implemented without splash formation, slacken the brass union nut on the backfeed unit and remove the strainer with gasket as well as the filter sponge and clean.
- Switch the potable water backfeed off again after test run. Otherwise the cistern may overflow and the potable water is conducted via the overflow directly into the sewer.
- With automatic potable water backfeed, check the level in the cistern.

6.3 Pump operation

- Fill suction pipe and submersible pump with water. To do this, connect the cistern-side end of the suction pipe to a water source, e.g. a garden hose, and leave at least one draw-off point open to allow air to escape. When using a suction pipe with strainer, unscrew this beforehand.

Fill the entire system by opening the feed valve until water discharges free of bubbles on the delivery side from the open draw-off point. Remove the hose, screw the strainer back on if removed.

This procedure reliably bleeds the system making it ready for immediate operation.

- Connect the mains plug of the pressure switch. The submersible pump starts up immediately.
- During the initial start-up leave one draw-off point, e.g. a water tap, open so that the complete system can be bled. If the pump does not start up or stops after a short period, press the red “**RESET**” button

Repeat this process until water discharges from the draw-off point bubble free.

As soon as the system has been completely bled, close all draw-off points. The submersible pump attains its maximum pressure, the unit switches off automatically.

- Check that the float or the ultrasonic sensor has been installed and adjusted in the rainwater storage tank as specified in the operating instructions for the KESSEL Aqatronic control unit. Adjust the switching point so that it switches over to potable water backfeed operation at a water level of under 15 – 20 cm. This avoids intake from the sediment layer.
- Check all connections for leaks.
- The KESSEL rainwater management system is now ready for operation.

7. Maintenance

Always observe the „Safety Guidelines“ chapter!

The KESSEL *Aqadive*® rainwater pump system is maintenance free to a large extent.

- Avoid dry running of the submersible pump as the mechanical seal is cooled with liquid.
- If aggressive media are to be delivered always flush the pump after use.
- Drain the pump if there is a risk of frost.
- Drain the pump unit and pressure switch if the KESSEL rainwater pump system is not used for a prolonged period. If the system is not used at all over a prolonged period clean the pump and pressure switch and store in a dry and well vented place.
- Check the open feed of the KESSEL potable water backfeed unit regularly. When doing so, check the safety distance between the feed valve and the overflow with fully opened inlet. Always observe compliance with the DIN 1989 Part 1.
- Clean the float switch or ultrasonic sensor at regular intervals to remove soiling.
- Also regularly clean the filter sponge and strainer of the backfeed unit, at the latest as soon as the potable water supply is no longer flowing splash-free.
- Check the suction and pressure pipes and all connections for leaks every now and again and seal if necessary.
- Clean the fine or coarse filter of the floating suction pipe at regular intervals.
- Only when the emergency overflow is connected to the sewer. The trap of the emergency overflow dries out over the course of time. Top this up at regular intervals to avoid odours.
- Regularly clean the area around the system to avoid foreign particles from entering the backfeed unit.

We recommend arranging a maintenance agreement with your plumbing company.

You will find a draft agreement in the operating instructions.

8. Troubleshooting

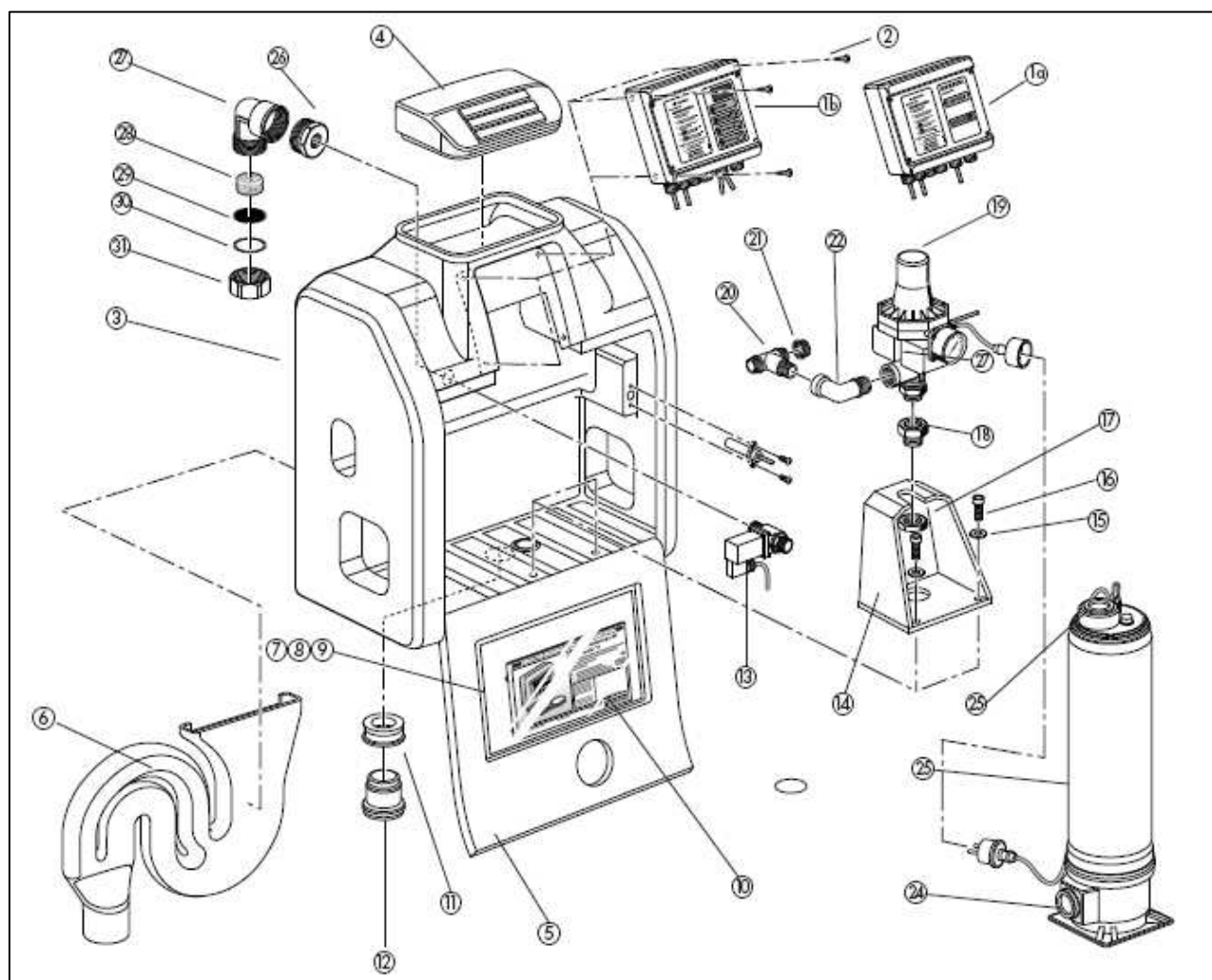
**Unplug the system before all repair and maintenance work.
Observe the safety guidelines in Chapter 1.**

Any repair work on the electrical system and the pump may only be carried out by a qualified electrician or the KESSEL Customer Services Department.

Possible malfunction	Cause	Measures to be taken
Motor doesn't start	No mains voltage. Motor or condensator is defective.	Check that mains plug is in wall socket or whether wall socket is supplied with electricity. Please talk to KESSEL Customer Services.
No suction in pump	Suction valve is not in water. Pump impeller has no water. There is air in the suction pipe. Suction valve is leaking. Pump strainer is blocked.	Lower the suction point below the water level. Fill pump with water. If necessary, fill up suction hose. Check that suction pipe is watertight. Clean suction valve. Clean pump strainer.
Pump does not turn off	The KIT-02 automatic pressure switch is defective	Exchange automatic pressure switch.
Pump flow rate is unsatisfactory	Pump strainer is dirty. Water level is too low. There is air in the suction pipe.	Clean pump strainer. Lower suction valve. Check that the suction pipe is watertight.
Thermo-switch turns off pump	Temperature of pump medium is too high. Pump is defective.	The temperature exceeds the pump's possible operative range. Please talk to KESSEL Customer Services.

8. Replacement parts and Accessories

9.1 Replacement parts



- | | | | |
|----|---|----|------------------------------------|
| 1a | 210-075 Aqatronic S control unit | 15 | 017-012 Washers |
| | 210-069 same as above with float switch | 16 | 017-095 KIT housing bolts |
| 1b | 210-315 Aqatronic K control unit | 17 | 210-035 Nuts |
| 2 | 210-315 Control unit mounting screws | 18 | 210-034 Adapter unit 1 1/4" x 1" |
| 3 | 234-003 Aqadive body | 19 | 210-036 Pressure switch |
| 4 | 234-002 Aqadive cover | 20 | 210-072 T fitting |
| 5 | 234-005 Aqadive hinged door | 21 | 210-103 Pipe cap |
| 6 | 234-006 Emergency overflow with odor trap | 22 | 210-094 Pipe elbow |
| 7 | 010-201 Aqadive / Aqaset user's manual | 23 | 210-034 Adapter unit 1 1/4" x 1" |
| 8 | 010-010 Maintenance contract | 24 | 210-034 Adapter unit 1 1/4" x 1" |
| 9a | 010-104 Aqatronic S user's manual | 25 | 210-041 Submersible pump |
| 9b | 010-135 Aqatronic K user's Manual | 26 | 210-081 Adapter unit 1 1/4" x 1/2" |
| 11 | 182-565 Pipe gasket seal | 27 | 210-015 Pipe elbow 1 1/4" |
| 12 | 003-239 Sleeve DN 50 | 28 | 210-158 Filter sponge |
| 13 | 210-011 Solenoid valve | 30 | 210-065 Gasket |
| 14 | 239-001 KIT-housing | 31 | 210-063 Nut 1 1/4" |

9. Replacement parts and Accessories

9.2 Accessories



Art.# 85 050

KESSEL fine intake filter and course intake filter

Fine filter mesh width - 0.23 mm
Course filter mesh width - 1.2 mm
for the entry of **unfiltered** rainwater from tanks, floating design with PE float ball, intake hose (3 m long) and hose nozzle, filter with filter element made of woven high-grade steel, all connections 1 inch, with backflow preventer

Matches KESSEL *Aqabull*® Rainwater Pumping Systems

-	85 050	1	-	
	85 051	1	-	

Product Advantages:

- Ensures that the cleanest water is drawn in - about 15 cm below the surface.
- Protects the pump from drawing in sediment.
- High flow rate possible thanks to high-quality non-return valve.



Art.# 85 412

KESSEL-Foundation entry sealing device

with two DN 32/DN 40 gaskets, single DN 50 gasket (all gaskets with closure plug).

Fits both KESSEL Rainwater Management Systems

-	85 412	1	-	
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Art.# 80 085

KESSEL-Optical probe

with 5 meter cable, for level control of water level in *Aqabull*® or *Aqadive*® Rainwater Management Systems with *Aqatronic*®K control unit.

-	80 085	1	-	
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Art.# 85 020

KESSEL level measuring device

for analog indication of the volume of water in the cistern or tank, with 20 m control lead, pneumatic universal tank content meter for all tank sizes and heights

	85 020	1		
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Art.# 72 100

KESSEL *Staufix*® backwater valve

Automatic valve closure with emergency locking lever

DN 100	72 100	1	-	
DN 125	72 125	1	-	
DN 150	72 150	1	-	
DN 200	72 200	1	-	

DN	100	125	150	200
L	355	390	460	530
H	140+60	148+60	165+60	178+60

L = length in mm
H = height in mm

With 1 stainless steel flap



DN 100	72 100R	1	-	
DN 125	72 125R	1	-	
DN 150	72 150R	1	-	
-	-	1	-	

10. Guarantee

1. In the case that a KESSEL product is defective, KESSEL has the option of repairing or replacing the product. If the product remains defective after the second attempt to repair or replace the product or it is economically unfeasible to repair or replace the product, the customer has the right to cancel the order / contract or reduce payment accordingly. KESSEL must be notified immediately in writing of defects in a product. In the case that the defect is not visible or difficult to detect, KESSEL must be notified immediately in writing of the defect as soon as it is discovered. If the product is repaired or replaced, the newly repaired or replaced product shall receive a new warranty identical to that which the original (defective) product was granted. The term defective product refers only to the product or part needing repair or replacement and not necessarily to the entire product or unit. KESSEL products are warranted for a period of 24 months. This warranty period begins on the day the product is shipped from KESSEL to its customer. The warranty only applies to newly manufactured products. Additional information can be found in section 377 and 378 of the HGB.

2. Wear and tear on a product will not be considered a defect. Problems with products resulting from improper installation, handling or maintenance will also not be considered a defect.

01.01.2002

Declaration of EC-Conformity

according to machine guide line 89/392/EWG, low-voltage guideline 73/23/EWG and
guideline regarding electromagnetic compatibility 93/97/EWG of 29.10.1993

The producer

KESSEL GmbH, D-85101 Lenting

confirms that the product

**KESSEL- *Aqadive*[®] Rainwater Management System
with Control Unit *Aqatronic*[®] S or *Aqatronic*[®] K**

were developed and produced in accordance
with the following standards:

**EN 292
EN 60335-1
EN 60730-1
EN 50081-1
EN 50082-1**

Lenting, 01.02.2001



B. Kessel



G. Vanetta

11. Important contacts / Info

Type	_____
KESSEL Order Number	_____
Production Date	_____
Project description / Building services supervisor Address Telephone / Fax	_____ _____ _____ _____
Planner Address Telephone / Fax	_____ _____ _____
Contracted construction company Address Telephone / Fax	_____ _____ _____
Contracted plumbing company Address Telephone / Fax	_____ _____ _____
Contracted electrical company Address Telephone / Fax	_____ _____ _____
System operator Address Telephone / Fax	_____ _____ _____
Other remarks	_____

The system operator, and those responsible, were present during the commissioning of this system.

Place and Date

Everything for drainage



- Backwater valves and cleanouts
- Polymer and cast iron drains
- Volatile liquid traps
- Lifting stations, pumps, warning and control units
- Rainwater management systems
- Grease separators
- Oil/fuel and coalescence separators
- Inspection chambers
- Custom projects for industrial applications